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[Continued on next page]

(54) Title: HOME NETWORK SYSTEM

APPLICATION SOFTWARE		. (MESSAGE		
APPLICATION LAYER		APDU HEADER	MESSAG		
NETWORK LAYER	NPDU HEA	DER	APDU	NPDU TRAILER	$\overline{1}$
HOME CODE CONTROL SUB-LAYER	HOME CO	DE	NPDU		
DATA LINK LAYER	FRAME HEADER	HCNF	PDU	FRAME TRAILER	?
PHYSICAL LAYER					

(57) Abstract: The present invention discloses a home network system using a living network control protocol. The home network system includes: a network based on a predetermined protocol; at least one electric device connected to the network; and a network manager connected to the network, for controlling and/or monitoring the electric device, wherein the protocol includes an application layer, a network layer, a data link layer and a physical layer, wherein the physical layer further includes a special protocol for providing an interface with a dependent transmission medium, and the network layer further includes a home code control sub-layer for managing a home code form network security when accessing the dependent transmission medium; and wherein an application layer protocol data unit (APDU) is transmitted between the application layer and the network layer, a network layer protocol data unit (NPDU) is transmitted between the network layer and the home code control sub-layer, a home code control sub-layer protocol data unit (HCNPDU) is transmitted between the home code control sub-layer, and a data frame unit is transmitted between the data link layer and the physical layer.





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